



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,718	02/07/2005	Nigel B. Aldridge	540-552	8401
23117	7590	02/02/2006	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			LEPISTO, RYAN A	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/523,718

Applicant(s)

ALDRIDGE ET AL.

Examiner

Ryan Lepisto

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/7/05, 7/26/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 100', 102', 106', 108', 112', 114', 326, 404, 412, 414, 430, 432, 436 and 514.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 204' and 258'.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The attempt to incorporate subject matter into this application by reference to the foreign patent applications listed on page 2, line 12 and all the references listed on pages 3 and 4 expect for the "Development of fiber optical ingress/egress..." document are ineffective because the document were not provided to the office in an information disclosure statement with accompanying copies of the documents.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-2, 4-8, 10, 14-16 and 18-23** are rejected under 35 U.S.C. 102(a) as being anticipated by **Tourne (WO 02/061481 A3)** (reference cited in applicant's information disclosure statement filed 07 February 2005 and therefore is already in the application file). Tourne teaches a waveguide assembly (Figs. 1-12, paragraphs 0026-0028, 0030-0035, 0037, 0039 and 0045) comprising an optical waveguide (fiber, 140) embedded in a multiple layered (and therefore composite) substrate material (part of board 600 including layers 508, 506, 504), a waveguide connector (130) having a base portion (four sided rectangular base) and four slanted sides for stabilizing the connector in the board and to provide surfaces for connection to external connectors (110, 120), a

neck portion having a waveguide channel (132) disposed perpendicular to the embedded waveguide (140) and protrudes from the surface of a hole (604) in the board (600) and that couples the embedded waveguide (140) to a surface of the substrate material to provide an interface to surface modules (connectors 110 and 120). The waveguide assembly is made by coupling the waveguide (140) to the connector (130) (Fig. 2), capping the connector with copper foil (512) and embedding the connector and waveguide in the substrate (Fig. 5).

5. **Claims 1, 11-13, 21 and 24-25** are rejected under 35 U.S.C. 102(b) as being anticipated by **British Aerospace Public Limited Company (EP 1 150 150 A1)** (BAE) (reference cited in applicant's information disclosure statement filed 07 February 2005 and therefore is already in the application file). BAE teaches a waveguide assembly and the inherent method of forming the assembly (Figs. 1-3) comprising a waveguide (16) embedded in either plastic, carbon fiber (aligned carbon fibers), glass or metal (paragraph 0002) composite material (14) for use as a structure support on an aircraft body (paragraph 0002), a waveguide connector (10) coupled to the fiber (16) and having a neck channel portion (Fig. 2, optical port) disposed transverse to the fiber (16) to couple the fiber (16) to a surface module (paragraph 0032).

6. **Claims 1, 8 and 9** are rejected under 35 U.S.C. 102(b) as being anticipated by **Stowe et al (US 5,138,676)** (Stowe). Stowe teaches a waveguide assembly (Fig. 6b) comprising a fiber (2) embedded in a metal housing (substrate material, 3), a connector

(the structure shown in Fig. 6b) having a neck channel portion (1) disposed transverse to the fiber (not labeled) that is coming from the right side of Fig. 6b with a mini-bend fiber portion (11) that couples the portion from the right side of Fig. 6b to the fiber portion labeled (2) (column 15 lines 29-53).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 3 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tourne as applied to claims 1-2, 4-8, 10, 14-16 and 18-23 above, and further in view of **Malone (US 6,659,659 B1)**.

Tourne teaches the waveguide assembly described above.

Tourne does not state explicitly that the connector is made of an inert metal alloy

Malone teaches a waveguide assembly (Fig. 2) comprising a waveguide connector having a ferrule portion (206) made of ARCAP (column 4 lines 17-18), which is an inert metal alloy.

Tourne and Malone are analogous art because they are from the same field of endeavor, optical waveguide connectors.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use ARCAP as the connector material since Tourne calls for any material that can withstand high temperatures (paragraph 0027).

The motivation for doing so would have been to reduce cost and complexity by using a material that is commonly used for well-known connector types (Malone, column 4 lines 19-22).

Conclusion

8. Note that claims 11-13 are also anticipated by Tourne since a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (The preamble of claim 1 recited that the apparatus was "for mixing flowing developer material" and the body of the claim recited "means for mixing ..., said mixing means being stationary and completely submerged in the developer material". The claim was rejected over a reference which taught all the structural limitations of the claim for the intended use of mixing flowing developer. However, the mixer was only partially submerged in the developer material. The Board held that the amount of submersion is immaterial to the structure of the mixer and thus the claim was properly rejected.).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Lepisto whose telephone number is (571) 272-1946. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ryan Lepisto

Art Unit 2883

Date: 1/23/06


Frank Font

Supervisory Patent Examiner

Technology Center 2800